

Question: Q217

National Group: United Kingdom

Title: The patentability criterion of inventive step / non-obviousness

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Introduction

UK law concerning the assessment of inventive step is based on judicial interpretation of section 3 of the Patents Act 1977 (as amended) ('PA'), which brings Article 56 of the Convention on the Grant of European Patents (the European Patent Convention, or the 'EPC') into UK law.

This response aims to deal with the approach of the UK Intellectual Property Office (UKIPO), the UK courts and, to a lesser extent, the European Patent Office (EPO) to the assessment of inventive step.

During pre-grant examination, the UKIPO tends to assess obviousness using the Pozzoli approach developed in the case law whereas the EPO tends to assess obviousness using the 'problem-solution' approach.

During post-grant litigation and invalidity proceedings concerning UK patents granted by the UKIPO and European patents granted by the EPO and validated in the UK, the UK courts will consider all factors that are relevant to the assessment of inventive step but will tend to use the Pozzoli approach.

The result can be that a different approach is taken during pre-grant and post-grant proceedings to the assessment of inventive step in relation to a European patent. However, it has been stated by a senior UK judge that the different approaches to assessing inventive step obtain the same result, as the standard to be met ("is it obvious?") remains the same. This is discussed further in the answers to questions 2, 4 and 28 below.

As discussed further below, the UKIPO and UK courts, unlike the EPO, generally do not permit 'mosaicing' of prior art documents to support a finding of lack of inventive step. Instead, the UKIPO and UK courts consider whether the teaching missing from the primary reference is part of the common general knowledge of the skilled person. The effect of this difference in approach to inventive step means that the UKIPO and UK courts often consider the general knowledge of the skilled person to be significantly broader than the EPO does.

I - Analysis of Current Law and Case Law

Level of inventive step / non-obviousness

1 - What is the standard for inventive step / non-obviousness in your jurisdiction? How is it defined?

EPO

The **European standard** of inventive step is defined by Article 56 EPC:

“An invention shall be considered as involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art. If the state of the art also includes documents within the meaning of Article 54, paragraph 3, these documents shall not be considered in deciding whether there has been an inventive step.”

(Referred to Article 54 recites:

“(1) ...

(2) The state of the art shall be held to comprise everything made available to the public by means of a written or oral description, by use, or in any other way, before the date of filing of the European patent application.

(3) Additionally, the content of European patent applications as filed, the dates of filing of which are prior to the date referred to in paragraph 2 and which were published on or after that date, shall be considered as comprised in the state of the art.”)

The UK approach

The **UK standard** of inventive step is defined by Section 3 PA:

“An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue only of section 2(2) above (and disregarding section 2(3) above).”

(Referred to section 2(2) recites:

“The state of the art in the case of an invention shall be taken to comprise all matter (whether a product, a process, information about either, or anything else) which has at any time before the priority date of that invention been made available to the public (whether in the United Kingdom or elsewhere) by written or oral description, by use or in any other way.

Referred to section 2(3) recites:

“The state of the art in the case of an invention to which an application for a patent or a patent relates shall be taken also to comprise matter contained in an application for another patent which was published on or after the priority date of that invention, if the following conditions are satisfied, that is to say –

(a) that matter was contained in the application for that other patent both as filed and as published; and

(b) the priority date of that matter is earlier than that of the invention”)

Please refer to the United Kingdom Group’s answer to Question 213 for further information on the attributes of the skilled person.

2 - Has the standard changed in the last 20 years? Has the standard evolved with the technical / industrial evolution of your jurisdiction?

No.

The UK and European standard of inventive step has not changed in the last 20 years in the sense that the statutory definition of inventive step set out in the PA and in the EPC has not changed.

However, our experience is that there has been a change in the way the standard is applied and that

it has become more difficult to obtain patents at both the UKIPO and the EPO, and that the application of the standard by the UK courts has also evolved.

The UK approach

The UK courts have developed their own approach to the statutory definition of inventive step, which is based on the four-step test set out by the Court of Appeal in *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd*, [1985] RPC 59, as restated by Jacob LJ in *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588 (see answer 28 below for the restated test). However, recently the UK courts have confirmed that these tests are not a substitute for the basic question "is it obvious?"; as stated by Jacob LJ in *Generics v Daiichi* [2009] RPC 23:

"There is at bottom only one test, namely that posed by Article 56 of the EPC transposed into UK law by s3 of the Patents Act 1977. Was the invention obvious to a person skilled in the art having regard to any matter which forms part of the state of the art?... One must not take any such other test or formula as if it were the statute - they are only tools for answering the statutory question."

The UK courts do not consider a failure to apply the *Windsurfing/Pozzoli* test an error of principle (see *Nampak Cartons v Rapid Action Packaging* [2010] EWHC 1458 (Pat). Other approaches to the "multi-factorial question" of obviousness may therefore also be considered, including the motivation (or lack thereof) for the skilled person to take the step separating the alleged invention from the prior art (the classic example is the 5¼ inch dinner plate, described by Laddie J in *Hoechst Celanese Corp v BP Chemicals Ltd* [1997] FSR 547. This approach was approved of by the courts in recent cases including *Scinopharm Taiwan Ltd v Eli Lilly & Company* [2009] EWHC 631 (Pat).

EPO

Our experience is that the EPO has become tougher on inventive step in recent years and that it is becoming more difficult to obtain granted patents.

3 - Does your patent-granting authority publish examination guidelines on inventive step / non-obviousness? If yes, how useful and effective are the guidelines?

Yes.

Both the UKIPO and EPO publish examination guidelines on inventive step. These are useful and effective tools to assist practitioners and applicants to understand the UKIPO's and EPO's current practice on examination for inventive step.

The UKIPO publishes a Manual of Patent Practice ('MoPP') available at: <http://www.ipo.gov.uk/pro-types/pro-patent/p-law/p-manual/p-manual-practice.htm>. Section 3 concerns examination for inventive step.

The EPO publishes Guidelines for Examination in the European Patent Office ('Guidelines') available at: <http://www.epo.org/patents/law/legal-texts/guidelines.html>. Part C, Chapter IV, Section 11 concerns examination for inventive step.

4 - Does the standard for inventive step / non-obviousness differ during examination versus during litigation or invalidity proceedings?

No.

As explained in the introduction, the same standard for inventive step is applied during examination and during litigation or invalidity proceedings. However the approach to assessment of inventive step is different. Please also refer to question 28.

The UK courts are better suited to hearing, and give more emphasis to expert evidence than UKIPO Examiners and the EPO Examination and Opposition Divisions. This means that, although the same standard is applied during examination and litigation or invalidity proceedings, and, where the patent

was granted by the UKIPO, the same legal test is applied pre- and post-grant, the UK courts have the benefit of more time and evidence to assess globally the case for inventive step and can sometimes take a different view on inventive step from that taken by the UKIPO or EPO. An important procedural difference which can have a substantive impact is the evidence from and cross-examination of expert witnesses in court proceedings.

Construction of claims and interpretation of prior art

5 - How are the claims construed in your jurisdiction? Are they read literally, or as would be understood by a person skilled in the art?

At the UKIPO and UK courts and the EPO, claims are construed in accordance with the Protocol to Article 69 EPC. Claims are construed by giving significant weight to their literal meaning. However, consideration is also given as to how the claims would be understood by the skilled person.

EPO

Article 69 EPC defines the extent of protection:

“(1)The extent of the protection conferred by a European patent or a European patent application shall be determined by the claims. Nevertheless, the description and drawings shall be used to interpret the claims.
.....”

Claims are interpreted in accordance with the Protocol on the Interpretation of Article 69 EPC of 5 October 1973 (as revised by the Revision Act of 29 November 2000):

“Article 1 - General principles

Article 69 should not be interpreted as meaning that the extent of the protection conferred by a European patent is to be understood as that defined by the strict, literal meaning of the wording used in the claims, the description and drawings being employed only for the purpose of resolving an ambiguity found in the claims. Nor should it be taken to mean that the claims serve only as a guideline and that the actual protection conferred may extend to what, from a consideration of the description and drawings by a person skilled in the art, the patent proprietor has contemplated. On the contrary, it is to be interpreted as defining a position between these extremes which combines a fair protection for the patent proprietor with a reasonable degree of legal certainty for third parties.”

Article 2 - Equivalents

For the purpose of determining the extent of protection conferred by a European patent, due account shall be taken of any element which is equivalent to an element specified in the claims.”

The UK approach

Lord Hoffmann held in *Kirin-Amgen Inc v Hoechst Marion Roussel Ltd* [2004] UKHL 46 that the determination of the extent of protection conferred by a European patent is an examination in which there is only one compulsory question, namely that set by article 69 EPC and its Protocol: what would a person skilled in the art have understood the patentee to have used the language of the claim to mean? Everything else, including the Protocol questions, is only guidance to the judge trying to answer that question.

The principles of claim construction were summarised by Jacob LJ in *Technip France SA's Patent* [2004] EWCA Civ 381 in paragraphs 41(a)-(k). These were approved by Lord Hoffmann in *Kirin-Amgen Inc v Hoechst Marion Roussel Ltd* apart from subparagraph (e), where Lord Hoffmann held that there is no presumption about the width of the claims when considering fairness to the patentee.

In *Mayne Pharma v Pharmacia Italia SpA* [2005] EWCA Civ 137, Jacob LJ summarised these principles, but omitting subparagraph (e) as follows:

- “(a) The first, overarching principle, is that contained in article 69 itself.
- (b) Article 69 says that the extent of protection is determined by the terms of the claims. It goes on to say that the description and drawings shall be used to interpret the claims. In short the claims are to be construed in context.
- (c) It follows that the claims are to be construed purposively - the inventor's purpose being ascertained from the description and drawings.
- (d) It further follows that the claims must not be construed as if they stood alone - the drawings and description only being used to resolve any ambiguity.
- (f) Nonetheless purpose is not the be-all and end-all. One is still at the end of the day concerned with the meaning of the language used. Hence the other extreme of the Protocol - a mere guideline - is also ruled out by article 69 itself. It is the terms of the claims which delineate the patentee's territory.
- (g) It follows that if the patentee has included what is obviously a deliberate limitation in his claims, it must have a meaning. One cannot disregard obviously intentional elements.
- (h) It also follows that where a patentee has used a word or phrase which, acontextually, might have a particular meaning (narrow or wide) it does not necessarily have that meaning in context.
- (i) It further follows that there is no general “doctrine of equivalents.”
- (j) On the other hand purposive construction can lead to the conclusion that a technically trivial or minor difference between an element of a claim and the corresponding element of the alleged infringement nonetheless falls within the meaning of the element when read purposively. This not because there is a doctrine of equivalents: it is because that is the fair way to read the claim in context.
- (k) Finally purposive construction leads one to eschew what Lord Diplock in *Catnic* called (at p.243) : ‘the kind of meticulous verbal analysis in which lawyers are too often tempted by their training to indulge’.”

6 - Is it possible to read embodiments from the body of the specification into the claims?

The UK approach

On the assumption that “embodiment” means a particular embodiment of the invention that is specifically described in the description, yes, it is possible to read such an embodiment into the claims in the sense that the independent claims must cover subject matter which is presented in the description as an embodiment of the invention.

The extent to which embodiments are used to interpret the claim language depends on who the skilled person is and the extent of their common general knowledge (please refer to the United Kingdom Group's answer to Question 213 for further information on the common general knowledge of the skilled person).

Embodiments specifically mentioned in the description, and the figures are used as an aid to interpreting the claims and determining their scope.

Omnibus claims are also permitted in UK patent applications/patents which encompass the embodiments described in the description.

7(i) - How is the prior art interpreted? Is it read literally or interpreted as would be understood by a person skilled in the art?

The prior art is interpreted from the point of view of the skilled person working in the relevant field at the priority date (or filing date as appropriate) of the application or patent.

7(ii) - Is reliance on inherent disclosures (aspects of the prior art that are not explicitly mentioned, but would be understood to be present by a person skilled in the art) permitted?

Yes.

UKIPO and EPO Examiners and UK courts may rely on inherent disclosure in the prior art. The extent to which this is possible will depend on the skilled person and his common general knowledge.

Our experience is that EPO Examiners are more willing than UKIPO Examiners to rely on aspects of a prior art reference that are not explicitly disclosed in that reference but which would allegedly be understood to be present in that reference by a person skilled in the art.

The UK courts require that an alleged inherent disclosure is supported by expert evidence as to the common general knowledge of the skilled person.

Please refer to the answer to question 10: prior art references may also be combined in certain limited circumstances.

8 - Do the answers to any of the questions above differ during examination versus during litigation?

Please refer to the introductory section and the answer to question 4 above.

Combination or modification of prior art

9(i) - Is it proper in your jurisdiction to find lack of inventive step or obviousness over a single prior art reference?

Yes.

It is proper for the UKIPO, the EPO and UK courts to find lack of inventive step or obviousness over a single prior art reference. It is also proper for the UKIPO, the EPO and UK courts to find lack of inventive step over the common general knowledge of the skilled person alone.

9(ii) - If yes, and assuming the claim is novel over the prior art reference, what is required to provide the missing teaching(s)?

The missing teaching(s) may be provided by the common general knowledge of the skilled person, another embodiment disclosed in the same prior art reference or another prior art reference specifically referred to in the primary prior art reference to which the skilled person could therefore reasonably be expected to refer.

Please also refer to the answer to question 10 below.

9(iii) - Is argument sufficient?

UKIPO and EPO

Yes.

Argument alone can be sufficient for the UKIPO and EPO to find a lack of inventive step or for the applicant to demonstrate an inventive step.

UK courts

No.

Generally argument alone will not be sufficient. A court will require expert evidence to support a finding of inventive step or lack of inventive step.

9(iv) - Is the level of the common general knowledge an issue to be considered?

Yes.

A preliminary step to the assessment of an inventive step is to assume the mantle of the skilled person and identify the common general knowledge of that skilled person.

Our experience is that the UKIPO and UK courts consider more to be common general knowledge than the EPO does and that the UKIPO and UK courts will not always require the common general knowledge to be evidenced by documents (e.g. text books) but will rely on expert evidence as well. As discussed in the introduction section, this is a reflection of the different approach to inventive step taken by the UKIPO and UK courts compared to the EPO.

10 - What is required to combine two or more prior art references? Is an explicit teaching or motivation to combine required?

No.

An explicit teaching or motivation to combine two references is more likely to lead to a finding of lack of inventive step (where features missing from the first reference are found in the second reference), but such a teaching or motivation is not necessarily required.

The UK approach

The UKIPO and UK courts do not permit a simple combination or 'mosaicing' of prior art references to support a finding of lack of inventive step apart from in certain circumstances (set out below). A prior art reference can typically only be combined by applying the skilled person's common general knowledge for a finding of lack of inventive step.

Prior art references may generally only be combined if:

- the second reference is found to be part of the common general knowledge of the skilled person. A prior art document that is well referenced and readily available, for example a text book, scientific paper or, perhaps, a well-known patent specification may be considered to form part of the common general knowledge;
- there is a specific reference in the primary prior art reference to which the skilled person could therefore reasonably be expected to refer; or
- if it can be shown that it would otherwise be obvious for the skilled person to refer to another piece of prior art.

In determining whether an invention is obvious in the light of a given document combined with common general knowledge, other documents, or instances of prior use, there are two major considerations: (i) whether the skilled person could reasonably be expected to find the document in conducting a diligent search for material relevant to the problem in hand; and (ii) whether, if he had found the document, he would have given it serious consideration.

According to the MoPP, section 3.43:

"In deciding whether or not it is obvious to combine the disclosure in two or more documents, the following considerations are likely to be relevant:-

(a) How the nature and the contents of the documents influence whether the person skilled in the art would combine them. For example where the disclosed features seem at first sight to have an inherent incompatibility or where one document has a

tendency to lead from the mosaic, this would be a pointer towards the combinations being inventive (see 3.91).

(b) Whether the documents came from the same technical field or from neighbouring or remote technical fields (see 3.26-3.28.2 and 3.44).

(c) The presence of references in one document to another.

(d) The amount of selection required to isolate the separate disclosures from the surrounding documentary material.

(e) Whether the contents of one document are so well known that the skilled man would always have them in mind in reading other documents (see 3.45).

(f) The age of the documents (see 3.38-3.39)."

The UK courts' approach to combinations was summarised in *Scinopharm Taiwan Ltd v Eli Lilly & Company* [2009] EWHC 631 (Pat):

"83. In my judgment it is only permissible to read two documents together if it is obvious to do so, as the Court of Appeal made clear in *Smithkline Beecham v Apotex Europe* [2005] FSR 23 at [96]:

"96. I think the Judge erred in principle here. The skilled man has his common general knowledge — the mental tools of his trade — but no more. The law of obviousness supposes that he can be given any individual piece of prior art and read it with that knowledge. The piece of prior art forms part of the "state of the art". What he cannot do is to just link one piece of prior art with another, unless so to do would itself be uninventive. No-one disputes what Lord Reid said in *Technograph v Mills & Rockley* [1972] RPC 346 at page 355:

"In dealing with obviousness, unlike novelty, it is permissible to make a 'mosaic' out of the relevant documents, but it must be a mosaic which can be put together by an unimaginative man with no inventive capacity.'"

84. The question whether it is obvious to read two documents together is one to be considered in the light of the particular circumstances of each case. Relevant factors may include whether one document refers to the other or whether one or both documents would be found on a literature search of the kind the skilled person would routinely carry out before attempting to find a solution to the problem the patent addresses. "

EPO

In our experience, EPO Examiners are willing to combine two prior art references as a basis for a finding of lack of inventive step.

According to Guidelines, Part C, Chapter IV, Section 11.6 entitled "Combining pieces of prior art":

"In the context of the problem-solution approach, it is permissible to combine the disclosure of one or more documents, parts of documents or other pieces of prior art (e.g. a public prior use or unwritten general technical knowledge) with the closest prior art. However, the fact that more than one disclosure must be combined with the closest prior art in order to arrive at a combination of features may be a sign of the presence of an inventive step, e.g. if the claimed invention is not a mere aggregation of features (see C-IV, 11.7).

A different situation occurs where the invention is a solution to a plurality of independent "partial problems" (see IV, 11.7 and 11.5.2). Indeed, in such a case it is

necessary to separately assess, for each partial problem, whether the combination of features solving the partial problem is obviously derivable from the prior art. Hence, a different document can be combined with the closest prior art for each partial problem (see T 389/86, OJ 3/1988, 87). For the subject-matter of the claim to be inventive, it suffices however that one of these combinations of features involves an inventive step.

In determining whether it would be obvious to combine two or more distinct disclosures, the examiner should also have regard in particular to the following:

(i) whether the content of the disclosures (e.g. documents) is such as to make it likely or unlikely that the person skilled in the art, when faced with the problem solved by the invention, would combine them - for example, if two disclosures considered as a whole could not in practice be readily combined because of inherent incompatibility in disclosed features essential to the invention, the combining of these disclosures should not normally be regarded as obvious;

(ii) whether the disclosures, e.g. documents, come from similar, neighbouring or remote technical fields (see C-IV, 11.3);

(iii) the combining of two or more parts of the same disclosure would be obvious if there is a reasonable basis for the skilled person to associate these parts with one another. It would normally be obvious to combine with a prior-art document a well-known textbook or standard dictionary; this is only a special case of the general proposition that it is obvious to combine the teaching of one or more documents with the common general knowledge in the art. It would, generally speaking, also be obvious to combine two documents one of which contains a clear and unmistakable reference to the other (for references which are considered an integral part of the disclosure, see IV, 7.1 and 9.1). In determining whether it is permissible to combine a document with an item of prior art made public in some other way, e.g. by use, similar considerations apply."

11 - When two or more prior art references are combined, how relevant is the closeness of the technical field to what is being claimed? How relevant is the problem the inventor of the claim in question was trying to solve?

Please refer to the answer to question 10 above.

The UK approach

In the UK, it is not usually possible to combine two or more references without applying the skilled person's common general knowledge.

In the event that two documents can be combined, for example because one of them is considered to be part of the skilled person's common general knowledge, or because it is specifically referred to in the primary reference, the closeness of the technical field to what is being claimed is likely to be an important factor.

The problem the inventor was trying to solve may be relevant, but greater consideration is likely to be given to any problems specifically referred to in the patent specification. The problem that the inventor was actually trying to solve may not be accurately reflected in the object statement set out in the patent specification.

Generally UK courts are not interested in what the inventor was trying to do. The court will pay greater regard to what the patent states and to expert evidence. The inventor may not have the same level of skill as the notional skilled person.

EPO

It is likely to be more difficult to show on the facts that it would have been obvious for the skilled person to combine more than two references. The greater the number of references that are sought to be combined, the harder this will become.

The closeness of the technical field of the prior art references to what is being claimed is likely to be considered an important factor.

The problem that the inventor was actually trying to solve may not be accurately reflected in the object statement set out in the patent specification. The EPO problem-solution approach requires an analysis of the objective technical problem to be solved. The objective technical problem need not be the problem that the inventor was actually trying to solve or the problem, if any, stated by the inventor in the application as filed.

12 - Is it permitted in your jurisdiction to combine more than two references to show lack of inventive step or obviousness? Is the standard different from when only two references are combined?

The UK approach

Please refer to answer to the answers to questions 10 and 11 above.

It is only permitted to combine references to show lack of inventive step in certain circumstances. Where combining is permissible, the greater the number of references that have to be combined to support a finding of lack of inventive step, the stronger the indication that the invention involves an inventive step.

EPO

Please refer to answer to the answers to questions 10 and 11 above.

General opinion is that if it is necessary to combine more than two prior art references to support a finding of inventive step, that is indicative that the invention was not obvious.

13 - Do the answers to any of the questions above differ during examination versus during litigation?

As explained in the introduction, UK courts take a different approach to the assessment of inventive step in post-grant proceedings in relation to a European patent compared to the EPO during examination. Where the EPO may have considered combinations of documents during pre-grant examination, such combinations are unlikely to be considered by a UK court in post-grant proceedings unless one of the situations discussed in the answer to question 10 applies.

Technical Problem

14 - What role, if any, does the technical problem to be solved play in determining inventive step or non-obviousness?

The UK Approach

UKIPO Examiners may consider the technical problem the inventor of the claim in question was trying to solve as one factor in the consideration of whether there is an inventive step.

A UK court is more likely than the UKIPO or EPO to hear expert evidence regarding the problem the inventor of the claim in question was trying to solve and take that into account in a global assessment of the existence of an inventive step. However this is still a secondary indication of inventive step and should therefore be assessed with caution. Please refer to the answer to question 25 for further information on secondary indications of inventive step.

EPO

As part of the problem-solution approach to the assessment of inventive step, EPO Examiners are obliged to consider the technical problem to be solved. Step 2 of that approach requires that "objective technical problem" to be solved is established. According to Guidelines, Part C, Chapter IV, Section 11.5.2 entitled "Formulation of the objective technical problem":

"In the context of the problem-and-solution approach, the technical problem means the aim and task of modifying or adapting the closest prior art to provide the technical effects that the invention provides over the closest prior art. The technical problem thus defined is often referred to as the "objective technical problem".

15 - To what degree, if any, must the technical problem be disclosed or identified in the specification?

The technical problem does not necessarily have to be disclosed or identified in the specification.

UK Approach

At the UKIPO, the technical problem the inventor was trying to solve is likely to be given more weight where the problem is explicitly disclosed in, or is derivable from, the application as filed.

At the UK courts, if the technical problem is not disclosed or identified in the specification, evidence is likely to be required.

EPO

According to Guidelines, Part C, Chapter IV, Section 11.5.2

The objective technical problem derived in this way may not be what the applicant presented as "the problem" in his application."

Advantageous effects

16 - What role, if any, do advantageous effects play in determining inventive step or non-obviousness?

The UK Approach

Advantageous effects are one factor to be considered in assessing whether there is an inventive step, provided that the advantage has not been provided by an otherwise obvious modification. If an invention is obvious, having an advantageous effect will not make it inventive. This is particularly relevant where the applicant has discovered that a variation thought to be disadvantageous is in fact not so, or the applicant has selected a variant with an unexpected advantage from a large number of variants which would have been regarded as no more than feasible alternatives with no advantage.

EPO

An unexpected or advantageous technical effect is one factor to be considered in assessing whether there is an inventive step, provided that the advantage has not been provided by an otherwise obvious modification.

17 - Must the advantageous effects be disclosed in the as-filed specification?

As a rule, no.

In examination at the UKIPO and EPO, the advantageous effects do not necessarily need to be explicitly disclosed in the as-filed specification. However, an argument based on advantageous effect is likely to carry more weight if it is mentioned in the as-filed specification or is deducible by the skilled person from the as-filed specification. The practice on this requirement is not, however, consistent across all technical fields. For example, in chemistry fields, there is likely to be more of a requirement by the nature of the subject matter to set out explicitly in the description the advantages provided by,

for example, a particular claimed composition, since such advantages would not necessarily be evident to the skilled person reading the specification.

In the UK courts, evidence of claimed advantageous effects is likely to be required, particularly if the advantageous effects are not explicitly disclosed in the as-filed specification.

18 - Is it possible to have later-submitted data considered by the Examiner?

The UK Approach

Yes.

Our experience, particularly in relation to pharmaceutical cases, is that it possible to have later-submitted data considered by the Examiner, provided the data does not extend the disclosure of the as-filed specification.

EPO

Yes.

According to Guidelines, Part C, Chapter II, Section 11.11:

“The relevant arguments and evidence to be considered by the examiner for assessing inventive step may either be taken from the originally-filed patent application or submitted by the applicant during the subsequent proceedings (see 11.5.2 above and VI, 5.3.4, 5.3.5 and 5.3.7). Care must be taken, however, whenever new effects in support of inventive step are referred to. Such new effects can only be taken into account if they are implied by or at least related to the technical problem initially suggested in the originally filed application (see also IV, 11.5.2, T 386/89, not published in OJ, and T 184/82,OJ 6/1984, 261)”.

19 - How “real” must the advantageous effects be? Are paper or hypothetical examples sufficient?

The advantageous effects should be credible. Paper or hypothetical examples might be sufficient if they would be clear to the skilled person reading the prior art.

20 - Do the answers to any of the questions above differ during examination versus during litigation?

The UK approach

During examination the advantageous effects can be completely hypothetical. In litigation, the advantageous effects must be proven with evidence to the satisfaction of the court for them to be indicative of an inventive step.

EPO

The EPO requires that the effects must be supported by sufficient evidence by the patentee (T-355/97). In litigation, the advantageous effects must be proven with evidence to the satisfaction of the court for them to be indicative of an inventive step and the court may impose a greater evidential burden on the applicant.

Teaching away

21 - Does your jurisdiction recognize teaching away as a factor in favour of inventive step / non-obviousness? Must the teaching be explicit?

The UK approach

Yes.

Teaching away is a secondary factor to be considered in relation to the existence of an inventive step. The UK court will consider secondary indicia as part of a global assessment of inventive step - see answer to question 2 above. The teaching away need not be explicit in the prior art but that would give weight to the existence for inventive step.

According to the MoPP, Section 3.75.1:

“Passages which lead away from the applicant's invention must be taken into account as well as those that lead towards it. It is relevant in looking at a prior document to consider whether the matter of interest to the obviousness question constitutes a principal feature of the prior document or whether it is mentioned merely as a detail in the performance of an entirely different concept, without any recommendation to the reader which would encourage him to use it in different circumstances.”

In the UK courts, teaching away would need to be supported by expert evidence.

EPO

Yes.

Teaching away is one factor to be considered in relation to the existence of an inventive step. The teaching away need not be explicit in the prior art but that would give weight to the existence for inventive step.

22 - Among the other factors supporting inventive step / non-obviousness, how important is teaching away?

The UK approach

At the UKIPO, teaching away is one element of the consideration of inventive step. Teaching away can be important but it is unlikely to be given any more weight than other secondary indicia of inventive step.

At the UK courts, obviousness is a jury type question to be assessed on the facts of each case and no single test is universally applicable. It will depend upon the case as to the importance of the teaching away, including the type of prejudice to be overcome – is it general or specific, and is it commercial or technical? The UK courts have made it clear that secondary indicia, such as teaching away, should be treated with caution (*Schlumberger v EMGS* [2010] EWCA Civ 819).

EPO

At the EPO Teaching away can be important but it is unlikely to be given any more weight than other secondary indicia of inventive step.

23 - Is there any difference in how teaching away is applied during examination versus in litigation?

Yes.

Teaching away can be found through argument alone during pre-grant examination but is likely to require evidence during post-grant litigation. Teaching away may have more effect in the UK courts where expert evidence can be used to support such an argument.

Secondary considerations

24 - Are secondary considerations recognized in your jurisdiction?

Yes.

Secondary considerations such as overcoming a technical prejudice and commercial success (please refer to question 25 for secondary indications) are recognised and taken into account by the UKIPO and the EPO.

At the UK courts, secondary considerations are generally recognised, but generally only come into play when asking “if it was obvious, why was it not done before?” and in this situation secondary evidence can play an important role (*Schlumberger v EMGS* [2010] EWCA Civ 819).

25 - If yes, what are the accepted secondary considerations? How and to what degree must they be proven? Is a close connection between the claimed invention and the secondary considerations required?

The UK Approach

A range of secondary indications are likely to be considered by UK Examiners, particularly the following:

- “Right to work” test – an invention will be regarded as obvious if a claim to it would inhibit the rights of a skilled workman to carry out routine modifications of what is already in the public domain;
- Was the invention “Lying in the road” waiting to be found by the skilled person?
- If the invention was obvious, why was it not done before?
- Does the invention fulfil a need – has it enjoyed commercial success?
- Would it be obvious to try the solution claimed as the invention?
- Is the claimed advantage an inventive one?
- Does this invention overcome a technical prejudice?

An inventive step may be found through argument of these secondary considerations. Evidence would help to show the existence of an inventive step.

UK courts will consider all relevant secondary indications of inventive step, including those listed above and also the inventor’s evidence and contemporaneous events and reactions. The weight they are given will depend on the extent to which their existence can be proven with evidence.

According to the MoPP, Section 3.75 entitled “The *Haberman* questions”:

“A number of issues should be considered in determining whether a development is obvious or not. In *Haberman v Jackal* [1999] FSR 685 (at 699 to 701), Laddie J considered the following non-exhaustive list of relevant questions some of which may not be answerable before grant or without evidence:

- (a) What was the problem which the patented development addressed?
- (b) How long had that problem existed?
- (c) How significant was the problem seen to be?
- (d) How widely known was the problem and how many were likely to be seeking a solution?
- (e) What prior art would have been likely to be known to all or most of those who would have been expected to be involved in finding a solution?
- (f) What other solutions were put forward in the period leading up to the publication of the patentee’s development?
- (g) To what extent were there factors which would have held back the exploitation of the solution even if it was technically obvious?

(h) How well had the patentee's development been received?

(i) To what extent could it be shown that the whole or much of the commercial success was due to the technical merits of the development?

EPO

According to Guidelines, Part C, Chapter II, Section 11.10, the following secondary indications of inventive step may be considered during examination:

- predictable disadvantageous modification leading to unexpected technical advantage;
- non-functional modification leading to unexpected technical advantage;
- arbitrary choice leading to unexpected technical advantage;
- unexpected technical effect;
- bonus effect;
- long-felt need;
- commercial success.

An inventive step may be found through argument of these secondary considerations. Evidence would help to show the existence of an inventive step.

26 - Do the answers to any of the questions above differ during examination versus during litigation?

Yes, particularly where the EPO was the granting authority.

Secondary factors may be considered by the EPO during examination of an application in finding an inventive step. During UK court proceedings based on a granted European patent, different factors may be considered and different weight may be given to the various secondary indications by the court, particularly where expert evidence is provided.

Other considerations

27 - In addition to the subjects discussed in questions 4 - 26 above, are there other issues, tests, or factors that are taken into consideration in determining inventive step / non-obviousness in your jurisdiction? If yes, please describe these issues, tests, or factors.

A UK court will take into account all relevant factors and tests when assessing inventive step. Jacob LJ stated in *Nichia v Argos* [2007] EWCA Civ 741 that "because obviousness is a multi-factorial question, it is impossible to devise a more detailed sort of question, suitable for all cases."

Test

28 - What is the specific statement of the test for inventive step/non-obviousness in your jurisdiction? Is there jurisprudence or other authoritative literature interpreting the meaning of such test and, if so, provide a brief summary of such interpretation.

Please refer to questions 1-4 above for the statutory tests for inventive step.

The UK Approach

In *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd*, [1985] RPC 59, the UK Court of Appeal held that the question of obviousness is a "kind of jury question" and "has to be answered, not by looking with the benefit of hindsight at what is known now and what was known at the priority date and asking whether the former flows naturally and obviously from the latter, but by hypothesizing what would have been obvious at the priority date to a person skilled in the art to which the patent in suit relates".

The court formulated a four-step approach to assessing obviousness, which was reviewed and restated by Jacob LJ in *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588. The reformulated approach is as follows:

- “(1)(a) Identify the notional “person skilled in the art”
- (1)(b) Identify the relevant common general knowledge of that person;
- (2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;
- (3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed;
- (4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?”

It is not obligatory for the UKIPO or UK courts to apply the *Pozzoli* test, because the question to be answered is whether or not the invention is obvious, however, the *Pozzoli* test allows the court to approach this question in the correct manner. Fundamental to the test is the question of who the skilled person is and what their common general knowledge is; this is typically only assessed by a court.

EPO

The EPO applies the problem-solution approach in which there are three principal steps:

- (i) determine the "closest prior art";
- (ii) establish the "objective technical problem" to be solved; and
- (iii) consider whether or not the claimed invention, starting from the closest prior art and the objective technical problem, would have been obvious to the skilled person.

29 - Does such test differ during examination versus during litigation?

The UK Approach

No.

The same test is applied by the UKIPO during examination and by UK courts during litigation.

EPO and UK courts

Yes.

The EPO applies the problem-solution approach during examination whereas UK courts will usually apply the *Pozzoli* test during litigation. A number of UK judgments have said that the same answer as to obviousness will be obtained, regardless of which of these tests is applied. The purpose of the “approach” is to put the judge or examiner in the correct position to answer the question about obviousness.

Patent granting authorities versus courts

30 - If there are areas not already described above where the approach to inventive step / non-obviousness taken during examination diverges from that taken by courts, please describe these areas.

Please refer to the answers to the previous questions.

The UKIPO and UK courts apply the same legal tests, however they are different forums, with different purposes, so the approach taken to the same question of the existence or absence of an inventive step is different. The greatest difference is evidence, which is less frequently filed during prosecution, compared to litigation during which there is usually a considerable amount of evidence to be considered.

31 - Is divergence in approach to inventive step / non-obviousness between the courts and the patent granting authority in your jurisdiction problematic?

No.

The divergence is not problematic. The standard of inventive step is the same. It is how the institutions prepare themselves to answer the question that is different and this is a result of the difference in resources available to the courts and the patent granting authorities.

Regional and national patent granting authorities

32 - If you have two patent granting authorities covering your jurisdiction, do they diverge in their approach to inventive step / non-obviousness?

Yes.

The UKIPO and the EPO are bound by the same legal definition and standard of inventive step. However, their approach to examination of inventive step is different, as discussed in a number of the answers set out above.

33 - If yes, is this problematic?

Potentially.

It has the potential to lead to uncertainty where different conclusions are reached by the UKIPO applying the Pozzoli approach and the EPO applying the problem-solution approach. Although it has been stated by UK courts that both approaches arrive at the same result, this is not always the case. The potential for different conclusions on inventive step being reached by the UKIPO and EPO mean that some applicants file both UK and European applications, in case the UKIPO and EPO reach different conclusions on inventive step.

II - Proposals for Harmonization

34 - Is harmonization of inventive step / non-obviousness desirable?

Yes.

Harmonization of the assessment of inventive step is desirable. However, an assessment of inventive step that is based on the ability to combine or 'mosaic' two or more prior art documents is not desirable. We believe that the combining of two or more prior art documents in the absence of a clear pointer from one document to the other is likely to involve *ex post facto* analysis. For example an EPO examiner is informed of the features which solve the problem and can then with hindsight and powerful databases find documents containing the features; whereas the notional skilled man with just the problem to hand has only his knowledge and the prior art he is likely to consider out of which the solution must present itself to him for it to be obvious.

The UK Group is of the view that there already is a fair degree of harmonization between the major jurisdictions. There are differences but most cases which are considered inventive in one jurisdiction are likely to also be considered inventive in others.

35 - Is it possible to find a standard for inventive step / non-obviousness that would be universally acceptable?

Yes.

In our opinion, it is possible to find a standard for inventive step / non-obviousness that is universally acceptable.

At its most basic level the test is: “would it have been obvious?” However, although the test is supposed to be an objective one, it has subjective considerations. Implementing the universal standard in a uniform way will therefore be a challenge for examining authorities and courts. Currently the EPO and the UK do both apply the same test of obviousness, however, they approach the question in a different way. Thus far, a unified approach to the question has not been found, although the judiciary in the UK have stated that the same results to those reached at the EPO are achieved. In practice, also, it is becoming more common to see a consistent result on inventive step from the highest levels of the courts in different European countries.

36 - Please propose a definition for inventive step / non-obviousness that you would consider to be broadly acceptable.

“An invention shall be considered as involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art.” (Article 56 EPC)

37 - Please propose an approach to the application of this definition that could be used by examiners and by courts in determining inventive step / non-obviousness.

It is proposed that the following approach should be applied by Examiners and courts:-

- identify the “person skilled in the art” and the level of common general knowledge of that person;
- identify what, if any, differences exist between the “state of the art” and the claimed invention;
- consider whether those differences would have been obvious to the person skilled in the art or whether they require any degree of invention.

The same legal test for, and standard of, inventive step should be applied by examiners and by courts in determining inventive step / non-obviousness. This should be the test proposed in the answer to question 36 above. However a different level of examination of evidence of inventive step should be taken by examiners and by courts. Examiners should reach a conclusion on inventive step based on the arguments and evidence submitted by the applicant and a detailed assessment of the prior art. Secondary indications of inventive step should also be considered where relevant.

The court should take into account all factors relevant to the existence or absence of an inventive step, particularly in relation to the evidence submitted by the parties.

Summary

It is proposed that the following approach should be applied by Examiners and courts:-

- identify the “person skilled in the art” and the level of common general knowledge of that person;
- identify what, if any, differences exist between the “state of the art” and the claimed invention;
- consider whether those differences would have been obvious to the person skilled in the art or whether they require any degree of invention.

The same legal test for, and standard of, inventive step should be applied by examiners and by courts in determining inventive step / non-obviousness. The test should be: “An invention shall be considered as involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art.”

However a different level of examination of evidence of inventive step should be taken by examiners and by courts. Examiners should reach a conclusion on inventive step based on the arguments and evidence submitted by the applicant and a detailed assessment of the prior art. Secondary indications of inventive step should also be considered where relevant.

The court should take into account all factors relevant to the existence or absence of an inventive step, particularly in relation to the evidence submitted by the parties.

Résumé

On propose que l'approche suivante devrait être appliquée par Examiners et cours :

- identifiez la “personne habile à l'art” et au niveau de la connaissance générale commune de cette personne ;
- identifiez ce que, le cas échéant, les différences existent entre l'état de la technique et l'invention réclamée ;
- considérez si ces différences auraient été évidentes à la personne habile dans l'art ou si elles exigent n'importe quel degré d'invention.

Le même essai légal pour, et la norme, de l'étape inventive devraient être appliqués par des examinateurs et par des cours pour déterminer l'étape/non-évidence inventives. L'essai devrait être : “Une invention est considérée comme impliquant une activité inventive si, pour un homme du métier, elle ne découle pas d'une manière évidente de l'état de la technique.”

Cependant un niveau différent d'examen d'évidence d'étape inventive devrait être pris par des examinateurs et par des cours. Les examinateurs devraient tirer une conclusion sur l'étape inventive basée sur les arguments et l'évidence soumise par le demandeur et une évaluation détaillée des indications secondaires antérieures d'art. de l'étape inventive devrait également être considérée là où approprié.

La cour devrait prendre en considération tous les facteurs concernant l'existence ou l'absence d'une étape inventive, en particulier par rapport à l'évidence soumise par les parties.

Zusammenfassung

Es wird vorgeschlagen, dass die folgende Annäherung durch Examiners und Gerichte angewendet werden sollte: -

- identifizieren Sie die „Person, die in die Kunst“ und in das Niveau des allgemeinen Allgemeinwissens dieser Person erfahren ist;
- identifizieren Sie, was wenn überhaupt Unterschiede zwischen der „Stand der Technik“ und der behaupteten Erfindung existieren;
- betrachten Sie, ob jene Unterschiede zur Person auf der Hand gelegen haben würden, die in die Kunst erfahren ist, oder ob sie irgendeinen Grad der Erfindung erfordern.

Der gleiche zugelassene Test für und der Standard von, erfinderischen Schritt sollten durch Prüfer und durch Gerichte angewendet werden, wenn man erfinderischen Schritt/Nichtaugenscheinlichkeit feststellt. Der Test sollte sein: „ Eine Erfindung gilt als auf einer erfinderischen Tätigkeit beruhend, wenn sie sich für den Fachmann nicht in naheliegender Weise aus dem Stand der Technik ergibt.“

Jedoch sollte ein anderes Niveau der Prüfung des Beweises von erfinderischem Schritt durch Prüfer und durch Gerichte genommen werden. Prüfer sollten zu einer Schlussfolgerung auf dem erfinderischen Schritt kommen, der auf den Argumenten basiert und die Beweise, die durch den Bewerber und eine ausführliche Einschätzung der vorherigen Art.-Sekundäranzeigen über erfinderischen Schritt vorgelegt werden, sollten auch betrachtet werden, wo relevant.

Das Gericht sollte alle Faktoren berücksichtigen, die zum Bestehen oder zum Fehlen einem erfinderischen Schritt, besonders in Beziehung zu den Beweisen relevant sind, die von den Parteien vorgelegt werden.